

honey over it, placing the old honey on yellow paper in between. She came to the honey on the red paper, but after feeding for about half a minute left it, to try that on the yellow.

I may mention that other observations of the same kind gave similar results; but it is perhaps hardly worth while to give more details.

Indeed, while hive-bees were generally contented with any honey I gave them, wasps showed a very different disposition, and, if there were several drops of honey near one another, flew frequently from one to the other, as if to make sure which they liked best.

Conduct towards their Friends.

With reference to the behaviour as regards comrades, I may observe that the results entirely confirmed those previously arrived at. For instance, a wasp observed and fed from the 7th to the 12th Sept. did not bring more than three or four friends during the whole of that time.

Contributions to the Ornithology of New Guinea. By R. BOWDLER SHARPE, F.L.S., F.Z.S., &c. Part V.—On recent Collections from the Neighbourhood of Port Moresby, S.E. New Guinea.

[Read March 20, 1879.]

THE collection described in the present paper was formed by Mr. Kendal Broadbent, a well-known Australian naturalist, in the vicinity of Port Moresby and in the interior. It is one of the most important that has been made by the English travellers in South-eastern New Guinea; and it will be interesting to compare the species here enumerated with the forthcoming account of Signor D'Albertis's collections from the Fly River. It may be noticed that in this paper a Parrot of the genus *Aprosmictus* is described, which is closely allied to another species from the Fly River, but yet appears to be distinct, offering a parallel case to the two Crowned Pigeons of Southern New Guinea, where we find *Goura Albertisi* inhabiting the Port-Moresby district replaced by *G. Selateri* on the Fly River. The same mountain-fauna seems to extend from the latter locality along the southern part of New Guinea, at least as far as the mountains in the interior of Port Moresby, if we may judge by the presence of such birds as *Drymædus Beccarii* and *Cinlosoma ajax*, which occurs in both Signor D'Albertis's and Mr. Broadbent's collections. When these moun-

tains are more thoroughly explored, it will doubtless be found that they contain a certain number of species closely allied to others from the mountains of the north-west, and in some cases even identical with the latter. At present, however, the affinities of the south-eastern species seem to lie with those of the Aru Islands where they are not Australian, as by far the majority of them really are. The discovery of two species of green-shouldered *Aprosmictus*, related to the fine *Aprosmictus insignissimus*, Gould, of Australia, and of a species of the peculiar Australian genus *Cinclosoma*, strengthen the Australian affinities of the avifauna of South-eastern New Guinea.

In the present paper I have also taken the opportunity of correcting some errors which have crept into my accounts of the collections made by Mr. Stone and Dr. James in the same locality and published in the Society's Journal.

Note.—Since the present communication was read, I have received from Mr. Ramsay a copy of his recent paper, laid before the Linnean Society of New South Wales on the 30th of last September, entitled "Contributions to the Zoology of New Guinea," parts 1 & 2 (Journ. Linn. Soc. N. S. W. iii. pp. 241–305). In this paper Mr. Ramsay describes the Parrot and Flycatcher which I considered to be new to science; and consequently my specific names must be suppressed. I refer to Mr. Ramsay's paper in the accompanying text.

1. *ASTUR TORQUATUS* (*Temm.*); *Sharpe, Mitth. Dresden*, iii. p. 355.—*Urospizias torquatus*, *Salvad. Ann. Mus. Civic. Genov.* xii. p. 38.—*Astur Sharpii*, *Ramsay, l. c.* p. 248.

Mr. Broadbent's collection contains a beautiful adult bird, measuring 10·3 inches in the wing. As in the case of Mr. Stone's specimen recorded by me in the 'Proceedings' of this Society, the thighs and under tail-coverts are both barred with rufous.

2. *HARPYOPSIS NOVÆ-GUINÆÆ*, *Salvad. Ann. Mus. Civic. Genov.* xii. p. 36; *Sharpe, Mitth. Dresden*, iii. p. 355, pl. xxix.

A very fine specimen collected by Mr. Broadbent bears the following label:—"Male: eyes dark brown. Fairfax Harbour, Port Moresby. Scrub bird." It measures as follows:—Total length 31 inches, culmen 2·7, wing 18·6, tail 15·5, tarsus 5·2.

3. *HIERACIDEA ORIENTALIS* (*Schl.*); *Sharpe, Cat. B. i.* p. 422.

An example in Mr. Broadbent's collection. The present is the first record of the occurrence of a *Hieracidea* in New Guinea; and

I cannot find any difference between the specimen from Port Moresby and others from Australia in the British Museum.

4. *APROSMICTUS CHLOROPTERUS*, *Ramsay, l. c.* p. 251.—*A. Broadbenti*, *Sharpe, Ann. & Mag. Nat. Hist.* April 1879, p. 313.

Adult male. General colour above blackish, with a slight greenish wash, the scapulars like the back; head all round crimson, with the exception of the nape and hind neck, which are bright blue, this colour extending on to the upper part of the mantle; lesser wing-coverts along the edge of the wing blackish like the back, with a very faint wash of blue; the inferior lesser coverts and the whole of the median series bright yellowish green, forming a large shoulder-patch; greater wing-coverts dark like the back; bastard wing, primary-coverts, and primary quills rather brighter green externally, blackish on the inner web; the inner secondaries darker, and becoming blacker as they adjoin the scapulars; lower back, rump, and upper tail-coverts deep blue; tail dull blackish, with a slight greenish gloss on the two centre feathers, the rest washed with blue externally; sides of face, throat, and entire under surface bright crimson; the under tail-coverts blue-black, tipped with the same crimson as the breast; under wing-coverts deep blue, the greater series and the lower surface of the quills black.

Closely allied to *A. callopterus* of the Fly River, but having the nape blue as well as the mantle, whereas the whole head is red in the above-mentioned species. *A. chloropterus* is also a slightly smaller bird.

5. *EOS FUSCATA*, *Blyth; Salvad. Ann. Mus. Civic. Genov.* x. p. 34; *Ramsay, l. c.* p. 253.

A numerous series in Mr. Broadbent's collection, as well as in Mr. Goldie's.

6. *NASITERNA KEIENSIS*, *Salvad. Ann. Mus. Civic. Genov.* x. p. 26; *Gould, B. New Guinea*, part vi.—*N. pusilla*, *Ramsay, l. c.* p. 251.

A specimen was in Mr. Broadbent's collection, and another in Mr. Goldie's. As far as I can judge without actually comparing specimens, these little Pygmy Parrots appear to belong to the species described by Count Salvadori from the Ké Islands.

7. *SCYTHROPS NOVÆ-HOLLANDIÆ*, *Lath.; Sharpe, Journ. Linn. Soc.* xiii. p. 492; *Ramsay, l. c.* p. 259.

According to Mr. Petterd, in his notes appended to Mr. Stone's collection (*cf.* Sharpe, *l. c.*), the Channel-bill Cuckoo was generally distributed near Port Moresby. The first specimens that I have seen from that locality have now come to hand, the species being represented in Mr. Broadbent's and Mr. Lawes's collections, while several specimens are in Mr. Goldie's.

8. *CENTROPUS NIGRICANS* (*Salvad.*).—*C. spilopterus*, Sharpe, *Journ. Linn. Soc.* xiii. p. 490 (*nec Gray*); *Ramsay, l. c.* p. 258.—*Polophilus nigricans*, *Salvad. Ann. Mus. Civic. Genov.* xiii. p. 463.

The number of specimens which I have now seen of this Cuckoo, bearing out Count Salvadori's characters, convince me that I was wrong in referring the bird to *C. spilopterus* of the Ké Islands.

9. *TANYSIPTERA SYLVIA*, Gould; Sharpe, *Journ. Linn. Soc.* xiii. p. 493; *Salvad. Ann. Mus. Civic. Genov.* x. p. 303.—*T. Salvadoriana*, *Ramsay, l. c.* p. 259.

In Mr. Broadbent's collection were several examples, which appear to be quite identical with Cape-York specimens.

10. *TANYSIPTERA MICRORHYNCHA*, Sharpe, *Journ. Linn. Soc.* xiii. p. 311.—*T. galatea* (pt.), *Salvad. Ann. Mus. Civic. Genov.* x. p. 302.—*T. galatea*, *Ramsay, l. c.* p. 259 (*nec Gray*).

I have now examined a large series of the Racket-tailed Kingfisher in the collections both of Mr. Goldie and Mr. Broadbent, and I find the character of the small bill holds good. A certain difference is seen in the blue coloration of the head, some specimens having a rich cobalt-brown, inclining to silvery cobalt only on the edges: this is the most plentiful form, and agrees with the type of the species in the Museum. In Mr. Broadbent's collections, however, was a beautiful bird, of the same size as *T. micro-rhyncha*, but differing in having the back strongly washed with purplish blue, the head and wing-spot rich silvery cobalt. This may be the very old male bird; and I do not propose to describe a new species from a single example.

11. *DENDROCHELIDON MYSTACEUS* (*Less.*).—*Macropteryx mystacea* (*Less.*); *Salvad. Ann. Mus. Civic. Genov.* x. p. 311; *Ramsay, l. c.* p. 265.

One specimen collected by Mr. Broadbent, and two in Mr. Goldie's collection.

12. *GYMNOCORAX SENEX* (*Less.*); Sharpe, *Cat. B.* iii. p. 50.

A specimen in grey plumage in Mr. Broadbent's collection.

13. *PTILORHIS ALBERTI*, *Elliot*; *Sharpe, Cat. B.* iii. p. 156.

Mr. Broadbent has sent a pair of male birds, which I refer to this species. The one retained for the Museum collection measures as follows—total length 11·8 inches, culmen 2·1, wing 7·55, tail 4, tarsus 1·7. It will be seen that these dimensions differ a little from those given by me in the ‘Catalogue of Birds;’ and the specific differences of the *males* of *P. Alberti* and *P. magnifica* become somewhat modified when the bird from Southern New Guinea is considered. As, however, the females of the two species are quite different, it will be interesting to examine this sex of the present bird from its new locality. Mr. Ramsay, who has the latter birds in his hands, declares them to be *P. magnifica*.

14. *PINAROLESTES MEGARHYNCHUS* (*Q. & G.*); *Sharpe, Cat. B.* iii. p. 295.—*Colluricincla megarhyncha*, *Ramsay, l. c.* p. 280.

A single specimen in Mr. Broadbent’s collection.

15. *GRAUCALUS SUBALARIS*, *Sharpe, Mitth. k. zool. Mus. Dresden*, Heft iii. p. 364; *id. Cat. B.* iv. p. 26.—*Campephaga Boyeri*, *Ramsay, l. c.* p. 284.

An adult male in Mr. Broadbent’s collection.

16. *EDOLIISOMA NIGRUM* (*Garn.*); *Sharpe, Cat. B.* iv. p. 45.—*E. melas*, *Ramsay, l. c.* p. 283.

An adult male in Mr. Broadbent’s collection, and a female in Mr. Goldie’s. This species was also contained in Mr. Stone’s collection, but was omitted by accident from the list given by me.

17. *MICRÆCA FLAVOVIRESCENS*, *Gray, Sharpe, Cat. B.* iv. p. 125; *Ramsay, l. c.* p. 272.

In Mr. Broadbent’s collection.

18. *PECILODREYAS PLACENS*.—*Eopsaltria placens*, *Ramsay, l. c.* p. 272.—*P. flavicincta*, *Sharpe, Ann. & Mag. Nat. Hist.* April 1879, p. 313.

Adult. General colour above yellowish green; the wing-coverts, quills, and tail-feathers dusky sepia-brown, edged with the same colour as the back; head and nape dark grey, with slight indications of dusky centres to the feathers of the crown; the lores, sides of face, and ear-coverts dark grey, the latter blackish; fore part of cheeks and a large chin-spot dark grey, the latter tinged with green where it joins the throat, which, with the hinder part of the cheeks and sides of the neck, is bright yellow; fore neck

chest, and sides of upper breast yellowish green, darker on the latter; remainder of under surface of body bright yellow; under wing-coverts and axillaries whitish, washed with yellow, with a dark greenish patch near the outer edge of the wing; quills dusky brown below, whitish along the basal edge of the inner web; bill black; feet pale yellowish in skin.

This appears to me to be a very distinct species of *Pæcilodryas*, nearer to *P. capito* and *P. leucops* than to any other, but quite different from either. The 'Key to the Species' in my Catalogue (vol. iv. p. 241) will require modification as follows:—

- b. Abdomen yellow.
 - c'. Lores with a large white spot &c.....
 - d'. Lores yellow, as also entire under surface; head olive-yellow like the back
 - e'. Lores grey, like the rest of the head, sides of face, and chin; above olive-yellow; below bright yellow, with the fore neck and chest green, forming a broad band across the chest
- { *leucops.*
capito.
papuana.
flavincta.

19. RHIPIDURA MACULIPECTUS, *Gray; Sharpe, Cat. B. iv. p. 326.*

Not to be distinguished from Aru-Island birds in the collection. A single example sent by Mr. Broadbent.

20. ARSES ARUENSIS, *Sharpe, Notes Leyden Mus. i. p. 21, et Cat. B. iv. p. 410.—Arses enado, Ramsay, l. c. p. 269.*

A pair in Mr. Broadbent's collection. The male seems to have even less black on the chin; and the female is rather brighter rufous and not so dark brown on the back. The bird from S.E. New Guinea may yet prove to be a distinct species from that of the Aru Islands when more complete series are available for comparison.

21. PACHYCEPHALA LEUCOGASTRA, *Salvad. & D'Albert. Ann. Mus. Civic. Genov. vii. p. 822.*

An adult specimen in Mr. Broadbent's collection. I have compared it with the type, kindly lent to me by Count Salvadori.

22. CINCLOSOMA AJAX.—*Eupetes ajax, Temm. Pl. Col. ii. pl. 573; Gray, Hand-l. B. i. p. 267, no. 3913.—E. Goldiei, Ramsay, l. c. p. 303.*

An adult male in Mr. Broadbent's collection, which he calls a "Mountain-Thrush." Signor D'Albertis exhibited a specimen from the Fly River at a recent meeting of the Zoological Society, and informed me that Count Salvadori had examined the series

brought by him, and had determined the bird to be the *Eupetes ajax* of Temminck. On this point the Count will be better informed than myself, as he has examined the type in the Leiden Museum, which I have not been able to do. We may therefore believe in the identity of the species now sent from South-eastern New Guinea, notwithstanding the difference in the plate of Temminck's work and the specimens now sent. The Leyden bird, however, is said to be a female; so that the differences may be merely sexual. The bird is certainly not a *Eupetes*, but is a *Cinclosoma*, and is interesting as adding one more Australian type to the avifauna of New Guinea.

The following is a description of Mr. Broadbent's specimen:— General colour above ochraceous brown, rather darker towards the lower back, rump, and upper tail-coverts; scapulars like the back; wing-coverts glossy black; quills blackish brown, externally ochraceous-brown, broader on the secondaries, the innermost of which are almost entirely ochraceous brown; two centre tail-feathers like the back; the rest of the tail black, with broad white ends to the outer feathers; lores, eyebrow, feathers below the eye, and ear-coverts glossy blue-black, forming a broad band of black, which runs from the base of the nostrils, encloses the eye, and extends down the sides of the neck; a second broad band of white extends from the base of the lower mandible, along the sides of the face, including the basal part of the ear-coverts, down the sides of the neck; cheeks, sides of throat, as well as the entire throat, fore neck, and chest glossy blue-black; sides of body from the sides of fore neck downwards clear orange-rufous, the lower flanks ochraceous brown; centre of the breast and abdomen white, separated from the orange-rufous sides of the body by a line of black, the feathers bordering the two lines of colour being externally white and internally black, the plumes of the breast where they adjoin the white of the underparts being black with white tips; thighs olive-brown; under tail-coverts mottled with white and black, the inner web being white and the outer one black; edge of wing black; under wing-coverts and axillaries white, with more or less concealed black bases; quills ashy below. Total length 9·2 inches, culmen 1, wing 3·9, tail 4, tarsus 1·35.

23. *EUPETES NIGRICRISSUS*, *Salvad. Ann. Mus. Civic. Genov.* ix. p. 36; *Ramsay, l. c.* p. 277.

The four specimens sent by Mr. Broadbent differ from *E. cæ-*

rulescens of North-western New Guinea exactly in the way pointed out by Count Salvadori; so that the black under tail-coverts, though a slight, seem to be a constant specific character.

24. *DRYMEDUS BECCARI*, *Salvad. Ann. Mus. Civic. Genov.* vii. p. 65; *id. P. Z. S.* 1878, p. 97.

The specimen sent in Mr. Broadbent's collection appears to belong to this species, which is one of great interest. The genus is Australian; and the present bird was described from the Arfak Mountains in N.W. New Guinea; and it was afterwards found in the Aru Islands by the 'Challenger' Expedition; so that S.E. New Guinea is an entirely new locality for the species.

25. *MELANOPYRRHUS ROBERTSONI*, *D' Albert.*—*Mina Robertsoni*, *Ann. Mus. Civic. Genov.* x. p. 12.—*Eulabes orientalis*, *Ramsay, l. c.* p. 279

A specimen is in Mr. Broadbent's collection; and another is in that of the Rev. Mr. Lawes. These two birds both have entirely yellow heads and necks, with a few remains of black feathers on the nape. I cannot bring myself to believe that these are of the same species as *M. anais* from North-western New Guinea, of which the Museum has three specimens collected by Mr. Wallace, and representing both adults and young. All three have well-defined black heads, with a broad yellow collar, also well defined, separating the crown from the back. The young one differs in being black below with yellow edges to the feathers, and in not having the yellow chest-patch developed. It may be surmised that *M. Robertsoni*, being so closely allied to *M. anais*, goes through somewhat similar stages of plumage, and may possibly have a black head in the immature dress. The adults, however, appear to be well characterized.

26. *REINWARDTENA REINWARDTI* (*Temm.*); *Salvad. Ann. Mus. Civic. Genov.* ix. p. 203.

Two adult specimens in Mr. Broadbent's collection.

27. *HENICOPHAPS ALBIFRONS*, *Gray*; *Salvad. Ann. Mus. Civic. Genov.* ix. p. 207.

Compared with birds from North-western New Guinea, the bill in the present specimen sent by Mr. Broadbent seems much larger. The metallic coloration also is much greener on the wing, not fiery copper as in two of Mr. Wallace's specimens in the Museum collection; a third, from N.W. New Guinea, is so

intermediate that no reliance can be placed on this colouring as a specific character.

28. *PHLOGŒNAS JOBIENSIS* (Meyer); Gould, *B. New Guinea*, part vii.—*Chalcophaps margarithæ*, *D'Alb. & Salvad. Ann. Mus. Civic. Genov.* vii. p. 836 (1875).—*Phlogœnas margarithæ*, *Salvad. op. cit.* viii. p. 495 (1878).

A somewhat immature specimen in Mr. Broadbent's collection in brown plumage, glossed with purplish violet on the sides of the neck and shoulders; the head dark grey, with a few rufous feathers remaining; the throat and chest whitish, obscured by rusty brown or greyish edges to the feathers; rest of under surface ashy brown, with obscure fulvous edges to the feathers. The specimen is not unlike Dr. Meyer's typical bird figured by Mr. Gould (*l. c.*).

29. *TALEGALLUS FUSCIROSTRIS*, *Salvad.*; Sharpe, *Journ. Linn. Soc.* xiii. p. 504.

The specimens sent by Mr. Broadbent and Mr. Goldie bear out the character of the dusky bill, on which Count Salvadori separated the species.

On the Classification of the Maioid Crustacea or Oxyrhyncha, with a Synopsis of the Families, Subfamilies, and Genera. By EDWARD J. MIERS, F.L.S., F.Z.S., Assistant in the Zoological Department, British Museum.

[Read March 6, 1879.]

(PLATES XII. and XIII.)

INTRODUCTORY REMARKS.

THE Oxyrhyncha, or Maioid Crabs, have been placed by nearly all carcinologists at the head of the Brachyura, on account of the high degree of concentration exhibited both in the sensory organs and nervous system. There is perhaps no one of the great divisions of the higher Crustacea more numerous in genera and species, or more interesting on account of the great variety both of form and structure exhibited in the different types, nor any in which a thorough revision of the classification is more urgently needed.

No comprehensive account of the group has appeared since the